

IN THE CLAIMS:

Listing of Claims:

Claim 1 (Original): A flash memory data structure, comprising:
fixed length cells, each having:

 a control and identifier section for containing a unique identifier and a cell count for logically associating multiple of said fixed length cells, and
 a data section for containing only a configuration value pertaining to said unique identifier.

Claim 2 (Original): The data structure recited in Claim 1 wherein said unique identifier is one byte long.

Claim 3 (Original): The data structure recited in Claim 1 wherein one of said fixed length cells equals a minimum storage space for said configuration value.

Claim 4 (Cancelled).

Claim 5 (Original): The data structure recited in Claim 1 wherein said fixed length cells are 32 bytes long, said control and identifier section is 4 bytes long and said data section is 28 bytes long.

Claim 6 (Original): The data structure recited in Claim 1 wherein said data section is located at an end of said fixed length cells.

Claim 7 (Original): The data structure as recited in Claim 1 wherein a length of said fixed length cells is configurable by a programming macro.

Claim 8 (Original): The data structure as recited in Claim 1 wherein a size of said data structure is configurable by a programming macro based on a manufacturing stage of development.

Claim 9 (Original): The data structure as recited in Claim 1 wherein said unique identifier corresponds to a configuration parameter in a lookup table.

Claim 10 (Original): The data structure as recited in Claim 1 wherein multiples of said unique identifier correspond to greater than 254 configuration parameters.

Claim 11 (Original): The data structure as recited in Claim 1 wherein said control and identifier section is configurable such that said unique identifier and said cell count are located in subsequent bytes at the beginning of said control and identifier section.

Claim 12 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 1.

Claim 13 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 2.

Claim 14 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 3.

Claim 15 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 4.

Claim 16 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 5.

Claim 17 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 6.

Claim 18 (Original): A flash memory controller for imposing on a flash memory the data structure as recited in Claim 11.

Claim 19 (Original): A flash memory containing the data structure as recited in Claim 1.

Claim 20 (Original): A flash memory containing the data structure as recited in Claim 2.

Claim 21 (Original): A flash memory containing the data structure as recited in Claim 3.

Claim 22 (Original): A flash memory containing the data structure as recited in Claim 4.

Claim 23 (Original): A flash memory containing the data structure as recited in Claim 5.

Claim 24 (Original): A flash memory containing the data structure as recited in Claim 6.

Claim 25 (Original): A flash memory containing the data structure as recited in Claim 11.

Claim 26 (Original): A method of writing to flash memory with fixed length cells, comprising:

locating a first of said fixed length cells that is free;

writing a unique identifier in a control and identifier section of said first free fixed length cell;

writing a configuration value pertaining to said unique identifier in a data section of said first free fixed length cell; and

updating a cell count in said control and identifier section to represent a number of said fixed length cells logically associated.

Claim 27 (Original): The method as recited in Claim 26 further including locking interrupts and updating a checksum of said configuration value in said control and identifier section.

Claim 28 (Original): The method as recited in Claim 26 further including searching said flash memory for a pre-existing configuration value having said unique identifier and marking said pre-existing configuration value as deleted.

Claim 29 (Original): The method as recited in Claim 26 further including updating a global variable during system initialization with an address of a first of said fixed length cells that is free.

Claim 30 (Original): The method as recited in Claim 29 further including testing said configuration value to determine completeness.

Claim 31 (Original): The method as recited in Claim 30 further including updating said cell count and marking said configuration value as deleted when determining said configuration value is not complete; and

updating said cell count and a checksum of said configuration value when determining said configuration value is complete.

Claim 32 (Original): The method as recited in Claim 31 further including validating checksums of each of said fixed length cells.

Claims 33-35 (Cancelled).